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[4910-13-P]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2005-23809; Directorate Identifier 2005-NE-52-AD; Amendment 39-15048; AD 2007-10-07]

RIN 2120-AA64

Airworthiness Directives; Turbomeca Arriel 2B Series Turboshift Engines

AGENCY: Federal Aviation Administration (FAA), Department of Transportation (DOT).

ACTION: Final rule; request for comments.

SUMMARY: We are superseding an existing airworthiness directive (AD) by adopting a new AD for the products listed above. This AD results from mandatory continuing airworthiness information (MCAI) issued by an aviation authority of another country to identify and correct an unsafe condition on an aviation product. The MCAI describes the unsafe condition as:

The deterioration of the splines on the HP/LP pump assembly drive shaft may eventually interrupt fuel supply and cause uncommanded in-flight engine shutdown. The result may be an emergency autorotation landing or, at worst, an accident.

Two cases of in-flight shutdown resulting from splines deterioration have been reported for the ARRIUS 2B1 engine, which has the same HP/LP pump drive design as the ARRIEL 2. These cases prompted us to require the inspection at 500 hours and each time the HMU is removed/installed.

This AD modifies the content of the previous DGAC France AD F-2005-188 (EASA Approval Number 2005-6408) in adding a one time inspection within 30 operating hours from effective date of this AD as well as HMU re-installation according to a maintenance task modified to avoid this kind of wrong assembly. This has been set up following a one case of improper

clipping of the coupling shaft onto the drive gear shaft, which resulted in an uncommanded in-flight engine shutdown (on a twin engine rotorcraft). This precaution measure has been taken only on engines powering single engine rotorcraft.

This AD requires actions that are intended to address the unsafe condition described in the MCAI.

DATES: This AD becomes effective [Insert date 15 days after date of publication in the FEDERAL REGISTER].

The Director of the Federal Register approved the incorporation by reference of Turbomeca Mandatory Service Bulletin No. 292 73 2812, Update No. 4, dated January 2, 2007, listed in the AD, as of [Insert date 15 days after date of publication in the FEDERAL REGISTER].

We must receive comments on this AD by [Insert date 30 days after date of publication in the FEDERAL REGISTER].

ADDRESSES: You may send comments by any of the following methods:

- DOT Docket Web Site: Go to <http://dms.dot.gov> and follow the instructions for sending your comments electronically.
- Fax: (202) 493-2251.
- Mail: Docket Management Facility, U.S. Department of Transportation, 400 Seventh Street, SW., Nassif Building, Room PL-401, Washington, DC 20590-0001.
- Hand Delivery: Room PL-401 on the plaza level of the Nassif Building, 400 Seventh Street, SW., Washington, DC, between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

- Federal eRulemaking Portal: <http://www.regulations.gov>. Follow the instructions for submitting comments.

Examining the AD Docket

You may examine the AD docket on the Internet at <http://dms.dot.gov>; or in person at the Docket Management Facility between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this AD, the regulatory evaluation, any comments received, and other information. The street address for the Docket Office (telephone (800) 647-5227) is in the ADDRESSES section. Comments will be available in the AD docket shortly after receipt.

FOR FURTHER INFORMATION CONTACT: Christopher Spinney, Aerospace Engineer, Engine Certification Office, FAA, Engine and Propeller Directorate, 12 New England Executive Park, Burlington, MA 01803; email: Christopher.spinney@faa.gov; telephone (781) 238-7175; fax (781) 238-7199.

SUPPLEMENTARY INFORMATION:

Streamlined Issuance of AD

The FAA is implementing a new process for streamlining the issuance of ADs related to MCAI. This streamlined process will allow us to adopt MCAI safety requirements in a more efficient manner and will reduce safety risks to the public. This process continues to follow all FAA AD issuance processes to meet legal, economic, Administrative Procedure Act, and *Federal Register* requirements. We also continue to meet our technical decision-making responsibilities to identify and correct unsafe conditions on U.S.-certificated products.

This AD references the MCAI and related service information that we considered in forming the engineering basis to correct the unsafe condition. The AD contains text copied from the MCAI and for this reason might not follow our plain language principles.

Discussion

The European Aviation Safety Agency (EASA), which is the Technical Agent for the Member States of the European Community, has issued AD 2007-0044, dated February 27, 2007 (referred to after this as “the MCAI”), to correct an unsafe condition for the specified products. The MCAI states:

The deterioration of the splines on the HP/LP pump assembly drive shaft may eventually interrupt fuel supply and cause uncommanded in-flight engine shutdown. The result may be an emergency autorotation landing or, at worst, an accident.

Two cases of in-flight shutdown resulting from splines deterioration have been reported for the ARRIUS 2B1 engine, which has the same HP/LP pump drive design as the ARRIEL 2. These cases prompted us to require the inspection at 500 hours and each time the HMU is removed/installed.

This AD modifies the content of the previous DGAC France AD F-2005-188 (EASA Approval Number 2005-6408) in adding a one time inspection within 30 operating hours from effective date of this AD as well as HMU re-installation according to a maintenance task modified to avoid this kind of wrong assembly. This has been set up following a one case of improper clipping of the coupling shaft onto the drive gear shaft, which resulted in an uncommanded in-flight engine shutdown (on a twin engine rotorcraft). This precaution measure has been taken only on engines powering single engine rotorcraft.

You may obtain further information by examining the MCAI in the AD docket.

This AD supersedes AD 2006-21-10, Amendment 39-14795 (71 FR 61634, October 19, 2006), which we issued in response to DGAC France AD F-2005-188.

Relevant Service Information

Turbomeca has issued Mandatory Service Bulletin No. 292 73 2812, Update No. 4, dated January 2, 2007. The actions described in this service information are intended to correct the unsafe condition identified in the MCAI.

FAA's Determination and Requirements of this AD

This product has been approved by the aviation authority of another country, and is approved for operation in the United States. Pursuant to our bilateral agreement with this State of Design Authority, they have notified us of the unsafe condition described in the MCAI and service information referenced above. We are issuing this AD because we evaluated all the information provided by the State of Design Authority and determined the unsafe condition exists and is likely to exist or develop on other products of the same type design. This AD requires the following:

- Visually inspecting splines of the coupling shaft assembly and the HP pump drive gear shaft for wear, within 30 hours-in-service from the effective date of this AD for engines that were previously inspected using Update 2 of MSB 292 73 2812;
- For engines that were not previously inspected using Update 2 of MSB 292 73 2812, visual inspection within 50 hours-in-service after the effective date of this AD for hydraulic mechanical units (HMUs) that have accumulated 450 or more hours time-since-new (TSN) or time-since-overhaul (TSO) on the effective date of this AD;

- For HMUs that have fewer than 450 hours TSN or TSO on the effective date of this AD, visual inspection after accumulating 450 hours TSN or TSO, but before accumulating 500 hours TSN or TSO;
- Repetitive inspections every time you remove or install the HMU.

Differences Between the AD and the MCAI or Service Information

We have reviewed the MCAI and related service information and, in general, agree with their substance. But we might have found it necessary to use different words from those in the MCAI to ensure the AD is clear for U.S. operators and is enforceable. In making these changes, we do not intend to differ substantively from the information provided in the MCAI and related service information.

We might also have required different actions in this AD from those in the MCAI in order to follow FAA policies. Any such differences are described in a separate paragraph of the AD. These requirements take precedence over the actions copied from the MCAI.

FAA's Determination of the Effective Date

An unsafe condition exists that requires the immediate adoption of this AD. The FAA has found that the risk to the flying public justifies waiving notice and comment prior to adoption of this rule because the compliance time required to correct the unsafe condition does not allow opportunity for prior public comment. Therefore, we determined that notice and opportunity for public comment before issuing this AD are impracticable and that good cause exists for making this amendment effective in fewer than 30 days.

Comments Invited

This AD is a final rule that involves requirements affecting flight safety, and we did not precede it by notice and opportunity for public comment. We invite you to send any written relevant data, views, or arguments about this AD. Send your comments to an address listed under the ADDRESSES section. Include “Docket No. FAA-2005-23809; Directorate Identifier 2005-NE-52-AD” at the beginning of your comments. We specifically invite comments on the overall regulatory, economic, environmental, and energy aspects of this AD. We will consider all comments received by the closing date and may amend this AD because of those comments.

We will post all comments we receive, without change, to <http://dms.dot.gov>, including any personal information you provide. We will also post a report summarizing each substantive verbal contact we receive about this AD.

Authority for This Rulemaking

Title 49 of the United States Code specifies the FAA’s authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. “Subtitle VII: Aviation Programs,” describes in more detail the scope of the Agency’s authority.

We are issuing this rulemaking under the authority described in “Subtitle VII, Part A, Subpart III, Section 44701: General requirements.” Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority

because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

Regulatory Findings

We determined that this AD will not have federalism implications under Executive Order 13132. This AD will not have a substantial direct effect on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify this AD:

1. Is not a “significant regulatory action” under Executive Order 12866;
2. Is not a “significant rule” under the DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979); and
3. Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

We prepared a regulatory evaluation of the estimated costs to comply with this AD and placed it in the AD docket.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

Adoption of the Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA amends 14 CFR part 39 as follows:

PART 39 - AIRWORTHINESS DIRECTIVES

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

2. The FAA amends § 39.13 by removing Amendment 39-14795 (71 FR 61634, October 19, 2006) and by adding the following new AD:

2007-10-07 **Turbomeca:** Amendment 39-15048.; Docket No. FAA-2005-23809; Directorate Identifier 2005-NE-52-AD.

Effective Date

(a) This airworthiness directive (AD) becomes effective [Insert date ** days after date of publication in the FEDERAL REGISTER].

Affected ADs

(b) This AD supersedes AD 2006-21-10.

Applicability

(c) This AD applies to Turbomeca Arriel 2B, 2B1, and 2B1A turboshaft engines. These engines are installed on, but not limited to, Eurocopter AS350B3 and EC130B4 helicopters.

Reason

(d) European Aviation Safety Agency (EASA) AD No. 2007-0044, dated April 27, 2007, states:

The deterioration of the splines on the HP/LP pump assembly drive shaft may eventually interrupt fuel supply and cause uncommanded in-flight engine shutdown. The result may be an emergency autorotation landing or, at worst, an accident.

Two cases of in-flight shutdown resulting from splines deterioration have been reported for the ARRIUS 2B1 engine, which has the same HP/LP pump drive design as the ARRIEL 2. These cases prompted us to require the inspection at 500 hours and each time the HMU is removed/installed.

This AD modifies the content of the previous DGAC France AD F-2005-188 (EASA Approval Number 2005-6408) in adding a one time inspection

within 30 operating hours from effective date of this AD as well as HMU re-installation according to a maintenance task modified to avoid this kind of wrong assembly. This has been set up following a one case of improper clipping of the coupling shaft onto the drive gear shaft, which resulted in an uncommanded in-flight engine shutdown (on a twin engine rotorcraft). This precaution measure has been taken only on engines powering single engine rotorcraft.

Actions and Compliance

(e) Unless already done, do the following actions.

(f) Perform an initial visual inspection of the splines of the coupling assembly and the high pressure (HP) pump drive gear shaft for wear. Use 2.A. through 2.C.(2) of the Instructions to be Incorporated of Turbomeca Mandatory Service Bulletin (MSB) No. 292 73 2812, Update No. 4, dated January 2, 2007, as follows:

(1) Inspect within 30 hours-in-service from the effective date of this AD for engines that were previously inspected using Update 2 of MSB 292 73 2812.

(2) For engines that were not previously inspected using Update 2 of MSB 292 73 2812, inspect as follows:

(i) Inspect within 50 hours-in-service after the effective date of this AD for hydraulic mechanical units (HMUs) that have accumulated 450 or more hours time-since-new (TSN) or time-since-overhaul (TSO) on the effective date of this AD. Replace the HMU if worn beyond limits.

(ii) Inspect after accumulating 450 hours TSN or TSO, but before accumulating 500 hours TSN or TSO for HMUs that have fewer than 450 hours TSN or TSO on the effective date of this AD. Replace the HMU if worn beyond limits.

Repetitive Visual Inspections

(g) Thereafter, perform a visual inspection of the splines of the coupling shaft assembly and the HP pump drive gear shaft for wear every time you remove the HMU. Use 2.A. through 2.C.(2) of the Instructions to be Incorporated of Turbomeca MSB No. 292 73 2812, Update No. 4, dated January 2, 2007. Replace the HMU and coupling shaft assembly if worn beyond limits.

FAA AD Differences

(h) None.

Other FAA AD Provisions

(i) The following provisions also apply to this AD:

(1) **Alternative Methods of Compliance (AMOCs):** The Manager, Engine Certification Office, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19.

(2) **Airworthy Product:** For any requirement in this AD, to obtain corrective actions from a manufacturer or other source, use these actions if they are FAA-approved. Corrective actions are considered FAA-approved if they are approved by the State of Design Authority (or their delegated agent). You are required to assure the product is airworthy before it is returned to service.

(3) **Reporting Requirements:** For any reporting requirement in this AD, under the provisions of the Paperwork Reduction Act, the Office of Management and Budget (OMB) has approved the information collection requirements and has assigned OMB Control Number 2120-0056.

Related Information

(j) Refer to European Aviation Safety Agency AD 2007-0044, dated February 27, 2007, for related information.

(k) Contact Christopher Spinney, Aerospace Engineer, Engine Certification Office, FAA, Engine and Propeller Directorate, 12 New England Executive Park, Burlington, MA 01803; email: Christopher.spinney@faa.gov; telephone (781) 238-7175; fax (781) 238-7199, for more information about this AD.

Material Incorporated by Reference

(l) You must use Turbomeca Mandatory Service Bulletin No. 292 73 2812, Update No. 4, dated January 2, 2007, to do the actions required by this AD, unless the AD specifies otherwise.

(1) The Director of the Federal Register approved the incorporation by reference of this service information under 5 U.S.C. 552(a) and 1 CFR part 51.

(2) For service information identified in this AD, contact Turbomeca, 40220 Tarnos – France; Tel (33) 05 59 74 40 00; Telex 570 042; Fax (33) 05 59 74 45 15.

(3) You may review copies at the FAA, New England Region, Office of the Regional Counsel, 12 New England Executive Park, Burlington, MA; or at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call (202) 741-6030, or go to: <http://www.archives.gov/federal-register/cfr/ibr-locations.html>.

Issued in Burlington, Massachusetts, on May 4, 2007.

A handwritten signature in black ink, appearing to read "Peter A. White". The signature is stylized with a large, looped initial "P" and a cursive "White".

Peter A. White,
Acting Manager,
Engine and Propeller Directorate,
Aircraft Certification Service.